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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/471,363	12/23/1999	GRAHAM J. DUNNETT	1263.0894	7316

5514 7590 09/04/2002

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EXAMINER

VO, CLIFF N

ART UNIT PAPER NUMBER

2671

DATE MAILED: 09/04/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/471,363

Applicant(s)

DUNNETT ET AL.

Examiner

CLIFF N VO

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-180 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) ____ is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☒ Claim(s) 1-180 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: ____.

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Part III DETAILED ACTION

Election/Restriction

1. Restriction to one of the following inventions is required under 35 U.S.C. § 121:

I. Claims 1-68, 107-124, 127-141, 144-145, 170, 173-174 and 177, drawn to a method and apparatus for processing data defining first polygons which approximate at least part of a curved three dimensional surface to produce second polygons for use in rendering an image of the surface, classified in Class 345, subclass 419.

II. Claims 69-106 and 175-176, drawn to a method and apparatus for calculating light intensity values for a polygon in a computer model of a three dimensional object, classified in Class 345, subclass 426.

III. Claims 125-126, 142-143, 146-169, 171-172 and 178-180, drawn to method and apparatus for defining a model of a three dimensional curved object utilizing the depth subdivision technique, classified in Class 345, subclass 421.

2. The inventions are distinct, each from the other because of the following reasons:

Group I as stated, is drawn to a method and apparatus for processing data defining first polygons which approximate at least part of a curved three dimensional surface to produce second polygons for use in rendering an image of the surface, wherein it is claimed that defining a respective surface patch to approximate the part of the object surface represented by the first polygon, dividing

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the first polygon into a plurality of notional polygons, and for each of the notional polygon, defining a second polygon for rendering using the surface patch of the first polygon to determine the positions of the vertices of the second polygon in three dimensional.

Group II as stated, is drawn to a method and apparatus for calculating light intensity values for a polygon in a computer model of a three dimensional object, wherein it is claimed that calculating a light intensity value at each of the plurality of control points for the polygon, defining a surface patch which interpolates the light intensity values calculated at the control points, and using the surface patch to calculate a light intensity value for each of the plurality of further points, which is distinct to the method and apparatus as claimed in Group I.

Group III as stated, is drawn to method and apparatus for defining a model of a three dimensional curved object utilizing the depth subdivision technique, wherein it is claimed that determining a depth of a sub-division in dependence upon a size of the representation, and generating a plurality of polygons in dependence upon the determined depth, which is distinct to the method and apparatus as claimed in Groups I and II.

3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classifications, and the search for Group I is not required for Groups II and III, restriction for examination purposes as indicated is proper.

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4. Applicant is advised that the response to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed.

5. **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 308-9051, (for formal communications intended for entry)

Or:

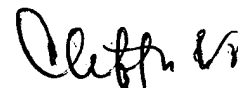
(703) 305-9724 (for informal or draft communications, please label
"PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,
Arlington, VA., Sixth Floor (Receptionist).

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cliff N. Vo whose telephone number is (703) 305-9594. He can normally be reached Monday-Friday and alternate Monday from 8:00am-5:30pm.

If attempts to reach the examiner are unsuccessful, the examiner's supervisor, Mark Zimmerman, can be reached at (703) 305-9798. The fax phone number for this Group is (703) 305-9724.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3800.



CLIFF N. VO
PRIMARY EXAMINER